IN THE CLAIMS:

Please CANCEL claims 1, 2, 3, 6, 7, 8, 16, 17 and 18, without prejudice or disclaimer.
Please AMEND the claims as indicated below:

1. (CANCELED)

2. (CANCELED)

3. (CANCELED)

4. (CURRENTLY AMENDED) A method comprising:

injecting a coating solution at a predetermined amount from one opening of a tube having an opening in each of both ends thereof, said coating solution containing an organic metal compound that turns into an inorganic metal compound having an electron emission ability by a burning process;

forming a coating film on the entire inner wall of the tube by causing the coating solution to go along the inner wall of the tube while entirely sealing the opening of the tube;

burning the coating film to form an electron emission film on the entire inner wall of the tube;

providing a plurality of light-emitting portions in the tube; ~~and~~

providing at least two discharge electrodes on an outside of the tube for applying voltages to the light emitting portions, and

locally solidifying the coating film formed in the vicinity of a tailing end of the coating solution going along the inner wall of the tube, wherein the local solidification of the coating film comprises

drying the coating film by moving a heat source utilizing visible light or an infrared ray and/or a microwave with the movement of the coating solution and irradiating the coating film with the visible light or infrared ray and/or microwave, or

fixing the metal compound in the coating film to the inner wall of the tube by moving a ultraviolet ray irradiating device with the movement of the coating solution and irradiating the coating film with the ultraviolet ray,

the tube thereby being a gas discharge tube having an electron emission film formed on the entire inner wall of the tube for improving discharge characteristics.

5. (ORIGINAL) The method as claimed in Claim 4, wherein the organic metal compound comprises magnesium hexanoate and the electron emission film comprises

magnesium oxide film.

6. (CANCELED)

7. (CANCELED)

8. (CANCELED)

9. (PREVIOUSLY PRESENTED) The method as claimed in Claim 4, further comprising:

using one or more forces of centrifugal force, gas pressure and liquid pressure for causing the coating solution to go along the tube.

10. (PREVIOUSLY PRESENTED) The method as claimed in Claim 4, further comprising:

drying the coating film by sending blast into the tube alternately from both ends of the tube.

11. (CANCELED)

12. (CURRENTLY AMENDED) A method comprising:

injecting a coating solution at a predetermined amount from one opening of a tube having an opening in each of both ends thereof, said coating solution containing an organic metal compound that turns into an inorganic metal compound having an electron emission ability by a burning process;

forming a coating film on the entire inner wall of the tube by causing the coating solution to go along the inner wall of the tube while entirely sealing the opening of the tube;

burning the coating film to form an electron emission film on the entire inner wall of the tube;

providing a plurality of light-emitting portions in the tube; ~~and~~

providing at least two discharge electrodes on an outside of the tube for applying voltages to the plurality of light-emitting portions, ~~the tube thereby being a gas discharge tube having an electron emission film formed on the entire wall of the tube for improving discharge characteristics, wherein~~ the electron emission film ~~is~~ being made of magnesium oxide; and

locally solidifying the coating film formed in the vicinity of a tailing end of the coating solution going along the inner wall of the tube, wherein the local solidification of the coating film

comprises

drying the coating film by moving a heat source utilizing visible light or an infrared ray and/or a microwave with the movement of the coating solution and irradiating the coating film with the visible light or infrared ray and/or microwave, or

fixing the metal compound in the coating film to the inner wall of the tube by moving a ultraviolet ray irradiating device with the movement of the coating solution and irradiating the coating film with the ultraviolet ray,

the tube thereby being a gas discharge tube having an electron emission film formed on the entire wall of the tube for improving discharge characteristics.

13. (CURRENTLY AMENDED) A method comprising:

injecting a coating solution at a predetermined amount from one opening of a tube having an opening in each of both ends thereof, said coating solution containing an organic metal compound that turns into an inorganic metal compound having an electron emission ability by a burning process;

forming a coating film on the entire inner wall of the tube by causing the coating solution to go along the inner wall of the tube while entirely sealing the opening of the tube;

burning the coating film to form an electron emission film on the entire inner wall of the tube;

providing a plurality of light-emitting portions in the tube;

providing at least two discharge electrodes on an outside of the tube;

providing a common electrode extending in a longitudinal direction of the tube;

providing a plurality of separate electrodes that oppose to the common electrode with respect to the tube and which are arranged at spaced intervals in the longitudinal direction of the tube, the light-emitting portions being formed in the tube at positions where the separate electrodes and the common electrode oppose to each other~~, the tube thereby being a gas discharge tube having an electron emission film formed on the entire wall of the tube for improving discharge characteristics~~; and

locally solidifying the coating film formed in the vicinity of a tailing end of the coating solution going along the inner wall of the tube, wherein the local solidification of the coating film comprises

drying the coating film by moving a heat source utilizing visible light or an infrared ray and/or a microwave with the movement of the coating solution and irradiating the coating film with the visible light or infrared ray and/or microwave, or

fixing the metal compound in the coating film to the inner wall of the tube by moving a ultraviolet ray irradiating device with the movement of the coating solution and irradiating the coating film with the ultraviolet ray,

the tube thereby being a gas discharge tube having an electron emission film formed on the entire wall of the tube for improving discharge characteristics.

14. (CURRENTLY AMENDED) A method comprising:

injecting a coating solution at a predetermined amount from one opening of a tube having an opening in each of both ends thereof, said coating solution containing an organic metal compound that turns into an inorganic metal compound having an electron emission ability by a burning process;

forming a coating film on the entire inner wall of the tube by causing the coating solution to go along the inner wall of the tube while entirely sealing the opening of the tube; ~~and~~

burning the coating film to form an electron emission film on the entire inner wall of the tube~~, the tube thereby being a gas discharge tube having the electron emission film formed on the inner wall of the tube to improve discharge characteristics~~; and

locally solidifying the coating film formed in the vicinity of a tailing end of the coating solution going along the inner wall of the tube, wherein the local solidification of the coating film comprises

drying the coating film by moving a heat source utilizing visible light or an infrared ray and/or a microwave with the movement of the coating solution and irradiating the coating film with the visible light or infrared ray and/or microwave, or

fixing the metal compound in the coating film to the inner wall of the tube by moving a ultraviolet ray irradiating device with the movement of the coating solution and irradiating the coating film with the ultraviolet ray,

the tube thereby being a gas discharge tube having the electron emission film formed on the inner wall of the tube to improve discharge characteristics.

15. (PREVIOUSLY PRESENTED) The method as claimed in Claim 14, wherein the organic metal compound comprises magnesium hexanoate and the electron emission film comprises magnesium oxide film.

16. (CANCELED)

17. (CANCELED)

18. (CANCELED)

19. (PREVIOUSLY PRESENTED) The method as claimed in Claim 14, further comprising:

using one or more forces of centrifugal force, gas pressure and liquid pressure for causing the coating solution to go along the tube.

20. (PREVIOUSLY PRESENTED) The method as claimed in Claim 14, further comprising:

drying the coating film by sending blast into the tube alternately from both ends of the tube.

21. (PREVIOUSLY PRESENTED) The method as claimed in Claim 14, further comprising:

forming at least two discharge electrodes on an outside of the tube.

22. (NEW) A method comprising:

injecting a coating solution at a predetermined amount from one opening of a tube having an opening in each of both ends thereof, said coating solution containing an organic metal compound that turns into an inorganic metal compound having an electron emission ability by a burning process;

forming a coating film on the entire inner wall of the tube by causing the coating solution to go along the inner wall of the tube while entirely sealing the opening of the tube;

burning the coating film to form an electron emission film on the entire inner wall of the tube;

providing a plurality of light-emitting portions in the tube;

providing at least two discharge electrodes on an outside of the tube for applying voltages to the light emitting portions; and

locally solidifying the coating film formed in the vicinity of a tailing end of the coating solution going along the inner wall of the tube,

wherein the local solidification of the coating film comprises drying the coating film by moving a heat source utilizing visible light or an infrared ray and/or a microwave with the movement of the coating solution and irradiating the coating film with the visible light or infrared ray and/or microwave, the tube thereby being a gas discharge tube having an electron emission

film formed on the entire inner wall of the tube for improving discharge characteristics.

23. (NEW) A method comprising:

injecting a coating solution at a predetermined amount from one opening of a tube having an opening in each of both ends thereof, said coating solution containing an organic metal compound that turns into an inorganic metal compound having an electron emission ability by a burning process;

forming a coating film on the entire inner wall of the tube by causing the coating solution to go along the inner wall of the tube while entirely sealing the opening of the tube;

burning the coating film to form an electron emission film on the entire inner wall of the tube;

providing a plurality of light-emitting portions in the tube;

providing at least two discharge electrodes on an outside of the tube for applying voltages to the light emitting portions; and

locally solidifying the coating film formed in the vicinity of a tailing end of the coating solution going along the inner wall of the tube,

wherein the local solidification of the coating film comprises fixing the metal compound in the coating film to the inner wall of the tube by moving a ultraviolet ray irradiating device with the movement of the coating solution and irradiating the coating film with the ultraviolet ray, the tube thereby being a gas discharge tube having an electron emission film formed on the entire inner wall of the tube for improving discharge characteristics.